

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A network ~~arrangement for comprising:~~
a plurality of nodes; and
~~each node being connected to one or more other nodes by corresponding node a plurality~~
of links, each node being connected to at least one other node by a respective link from the
plurality of links,

wherein:

the network ~~is being arranged into a recursive in a hierarchy of units having at~~
least two or more levels,
~~the nodes being the~~ the plurality of nodes are grouped into units of the a first level of the
hierarchy, based on at least one of geographical proximity, network ownership, and traffic flow,
~~the units of higher levels of the hierarchy are being formed by groupings together~~
of the units of a the previous level of the hierarchy, and
~~wherein the units of a same level exchange a corresponding load status~~
information.

2. (currently amended): ~~An arrangement~~ The network as claimed in claim 1 wherein,
within [[,]] each group of units, a master entity is designated, the master entity conveying inter-

unit load status information relating to the units of ~~that~~ the level of the master to the next higher level.

3. (currently amended): ~~An arrangement~~ The network as claimed in claim 1 wherein, in the first level, a selected node in each group is designated as the master node for the corresponding group, and the master node managing-manages the transfer of node load status information within its corresponding group.

4. (currently amended): ~~An arrangement~~ The network as claimed in claim 1, wherein the load status information includes information on the available traffic capacity between the ports of each unit.

5. (currently amended): ~~An arrangement~~ The network as claimed in claim 1, wherein each node includes node load status monitoring means to monitor the load status of the links connected to the node.

6. (currently amended): ~~An arrangement~~ The network as claimed in claim 1, wherein at least one node of each second level group is connected to a node of at least one other second level group via a corresponding group link whereby group load status information can be interchange.

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7. (currently amended): ~~An arrangement~~ The network as claimed in claim 6, wherein the units of the third level are formed by mutually interconnected second level units.

8 and 9 (canceled).

10. (new): The network as claimed in claim 3, wherein nodes in a unit send the load status information to only the master node.

11. (new): The network as claimed in claim 10, wherein the master node generates a message comprising all higher level load status information and collated information about the unit nodes.

12. (new): The network as claimed in claim 11, wherein the message comprises load status information at a regional link level, at inter-network links, at inter-group links, and at the unit nodes.

13. (new): A method for transferring network node status information between nodes, the method comprising:

each node of a first level groups signaling, to a respective master node of a respective group, load status information;

each master node aggregating said load status information signaled from said each node within the respective group;

said each master node signaling the aggregated load status information for the respective group to other first level groups and to a respective second level group, wherein each second level group comprises a plurality of the first level groups; and

said each master node of a second level group aggregating the signaled load status information of the respective first level groups and signaling the aggregated load status information to the respective first level groups;

wherein the plurality of nodes are grouped into the respective first level groups based on at least one of geographical proximity, network ownership, and traffic flow.